

WHAT IS CLAIMED IS:

1. A thermal recording material comprising a support, and a thermal color forming layer and a protective layer formed in that order on the support, the thermal color forming layer containing an electron-donating leuco-dye and an electron-receiving compound, and the protective layer containing inorganic pigment and at least one of amide-denatured polyvinyl alcohol and diacetone-denatured polyvinyl alcohol.

2. The thermal recording material according to claim 1, wherein the protective layer comprises an overcoat layer (A), which contains as principal constituents inorganic pigment and a water-soluble polymer, and another overcoat layer (B), which is formed on the overcoat layer (A) and contains as principal constituents a lubricant and another water-soluble polymer, and wherein the water-soluble polymer contained in the overcoat layer (A) includes at least a portion of the at least one of amide-denatured polyvinyl alcohol and diacetone-denatured polyvinyl alcohol.

3. The thermal recording material according to claim 1, wherein the protective layer further comprises a surfactant.

4. The thermal recording material according to claim 1, wherein the protective layer further comprises at least one water-soluble polymer selected from the group consisting of denatured

polyvinyl alcohols, starch, oxidized starch, urea-phosphorylated starch, styrene-maleic anhydride copolymers, alkyl esters of styrene-maleic anhydride copolymers, and styrene-acrylic acid copolymers.

5. The thermal recording material according to claim 1, wherein the protective layer comprises a thickness of from 0.5 μm to 3 μm .

6. The thermal recording material according to claim 1, wherein the at least one of amide-denatured polyvinyl alcohol and diacetone-denatured polyvinyl alcohol is crosslinked by a crosslinking agent.

7. The thermal recording material according to claim 6, wherein the crosslinking agent comprises a content amount of from 2 to 40 % by weight relative to the at least one of amide-denatured polyvinyl alcohol and diacetone-denatured polyvinyl alcohol.

8. The thermal recording material according to claim 6, wherein the crosslinking agent comprises at least one compound selected from the group consisting of polyaldehyde compounds, titanium lactate, dihydrazide compounds and boric acid.

9. The thermal recording material according to claim 6, wherein the crosslinking agent comprises at least one compound

selected from the group consisting of polyaldehyde compounds and titanium lactate.

10. The thermal recording material according to claim 6, wherein the crosslinking agent comprises an amount thereof which is contained in the overcoat layer (A).

11. The thermal recording material according to claim 1, wherein the inorganic pigment comprises at least one material selected from the group consisting of kaolin, aluminum hydroxide, calcium carbonate, zinc oxide, aluminum oxide, titanium dioxide, silicon dioxide, barium sulfate, zinc sulfate, talc, clay, calcined clay and colloidal silica.

12. The thermal recording material according to claim 1, wherein the inorganic pigment comprises at least one of kaolin and aluminum hydroxide that has a volume-average particle size of from 0.5 μm to 0.9 μm .

13. The thermal recording material according to claim 1, wherein the inorganic pigment comprises a content amount in the protective layer in the range of from 10 to 90 % by weight of the protective layer.

14. The thermal recording material according to claim 2,

wherein the lubricant comprises at least one material selected from the group consisting of zinc stearate, calcium stearate, paraffin wax, microcrystalline wax, carnauba wax, and synthetic polymer wax.

15. The thermal recording material according to claim 2, wherein the lubricant comprises a mean particle size of not more than 0.5 μm .

16. The thermal recording material according to claim 1, wherein the electron-receiving compound comprises at least one compound selected from the group consisting of 2,4'-dihydroxydiphenyl sulfone, 2,4-bis(phenylsulfonyl)phenol, 4,4'-sulfonylbis(2-(2-propenyl)phenol) and 2-hydroxy-4'-isopropoxydiphenyl sulfone.

17. The thermal recording material according to claim 1, wherein the electron-donating leuco-dye comprises at least one compound selected from the group consisting of phthalide compounds, fluoran compounds, phenothiazine compounds, indolylphthalide compounds, leuco-auramine compounds, rhodamine-lactam compounds, triphenylmethane compounds, triazene compounds, spiropyran compounds, pyridine compounds, pyrazine compounds, and fluorene compounds.